



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,748	09/26/2003	William Z. Guan	AVA-P012	9354

47389 7590 02/10/2005

MOSER, PATTERSON & SHERIDAN, LLP
AVANEX CORPORATION
3040 POST OAK BLVD
SUITE 1500
HOUSTON, TX 77056

EXAMINER

ESTRADA, ANGEL R

ART UNIT

PAPER NUMBER

2831

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,748

Applicant(s)

GUAN ET AL.

Examiner

Angel R. Estrada

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 6-22 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 2, 20 and 22 are objected to because of the following informalities:

Claim 2 line 3, change "the module housing" to --lid--.

Claim 20 line 2, change "lid" to --module housing--.

Claim 22 line 6, "the plurality of screws", lacks antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Chang (US 5,153,380).

Regarding claim 1, Chang discloses a fiber optic module package (see figure 3), comprising: a lid (4) having a bottom surface; and a module housing (1) having a knife-shaped edge (111); wherein the lid (4) and the module housing (1) are sealed when the knife-shaped edge (111) bites into the bottom surface of the lid to form a sealing mechanism (see figures 4a and 4c; or see column 2 lines 28-41).

Regarding claim 2, Chang discloses the fiber optic module package (see figure 3), further comprising a center die (not shown) for pressing the lid (4) onto the module

housing (1) such that the knife-shaped edge bites (111) into the bottom surface of the lid (see figures 4a and 4c; or see column 2 lines 28-41).

Regarding claim 14, Chang discloses a fiber optic module package (see figure 3), comprising: a lid (4); and a module housing (1), wherein the lid (4) and the module housing (1) are sealed together using a metal-to-metal contact sealing means for hermetically sealed the lid (4) and the module housing (1); and wherein the lid (4) and the module housing (4) are held together using a holding means between the lid and the module housing (see figures 4a and 4c; or see column 2 lines 28-41).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (US 5,153,380).

Regarding claim 8, Chang discloses a fiber optic module package (see figure 3), comprising: a lid (4); and a module housing (1) having an interior wall, wherein the lid (4) and the module housing (1) are held together when the interior wall is pressed into the lid to form a holding mechanism (see figures 4a and 4c; or see column 2 lines 28-41); but Chang lacks the lid having a curved surface around the outer edge of the lid. It would have been an obvious matter of design choice to change the shape of the lid from rectangular to circular or oval so that the lid would have a curved surface around its outer edge, since such a modification would have involved a mere change in the shape of a component. Where the instant specification and evidence of record fail to attribute any significance (novel or unexpected results) to a particular shape, a change of shape is generally recognized as being within the level of ordinary skill in the art. *Span-Deck Inc. V. FabCon, Inc.*, 215 USPQ 835.

Regarding claim 9, Chang discloses the fiber optic module package (see figure 3), wherein lid (4) has a bottom surface and the module housing (1) has a knife-shaped edge (111); and wherein the lid (4) and the module housing (1) are sealed when the knife-shaped edge (111) bites into the bottom surface of the lid (4) to form a sealing mechanism (see figures 4a and 4c; or see column 2 lines 28-41).

Regarding claim 10, Chang discloses the fiber optic module package (see figure 4), further comprising a center die (not shown) for pressing the lid (4) onto the module

Art Unit: 2831

housing (1) such that the knife-shaped edge (111) bites into the bottom surface of the module housing (1).

Regarding claim 11, the modified Chang discloses the fiber optic module package (see figure 4), further comprising a surrounding forming die (not shown) for pressing the interior wall of the module housing (1) into the curved surface of the lid (4) that serves as a holding mechanism for holding the lid and the module housing together (see figures 4a and 4c; or see column 2 lines 28-41).

4. Claims 6, 7, 12, 13 and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (US 5,153,380) in view of Shu (US 4,567,318).

Regarding claim 6, the Chang discloses the claimed invention except for the lid being made of a soft aluminum material and the module housing is made of a hard aluminum material. Shu teaches a fiber optic module package (see figure 4) comprising a lid (12) and a module housing (11) having knife-shaped edge (34) for forming a sealing mechanism; said lid (12) is made of soft aluminum material (column 4 lines 14-18) and the module housing is made of a hard metal material (such as hard aluminum, column 3 lines 36-40 or column 4 lines 48-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make Chang's module package with a lid made of a soft aluminum material and the module housing made of a hard aluminum material as taught by Shu to facilitate the assembly process between the lid and the housing. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the lid of a soft aluminum

material and the module housing of a hard aluminum material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 7, Shu teaches the fiber optic module package (see figure 4) wherein the soft aluminum material of the lid (12) comprises Alloy 1100 (column 4 lines 59-60); and wherein and the hard aluminum material of the module housing (11) comprises Alloy 6061 (column 4 lines 48-55).

Regarding claim 12, the modified Chang discloses the claimed invention except for the lid being made of a soft aluminum material and the module housing is made of a hard aluminum material. Shu teaches a fiber optic module package (see figure 4) comprising a lid (12) and a module housing (11) having knife-shaped edge (34) for forming a sealing mechanism; said lid (12) is made of soft aluminum material (column 4 lines 14-18) and the module housing is made of a hard metal material (such as hard aluminum, column 3 lines 36-40 or column 4 lines 48-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the modified Chang's module package with a lid made of a soft aluminum material and the module housing made of a hard aluminum material as taught by Shu to facilitate the assembly process between the lid and the housing. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the lid of a soft aluminum material and the module housing of a hard aluminum material, since it has been held to be within the general skill of a worker in the art to

Art Unit: 2831

select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 13, Shu teaches the fiber optic module package (see figure 4) wherein the soft aluminum material of the lid (12) comprises Alloy 1100 (column 4 lines 59-60); and wherein and the hard aluminum material of the module housing (11) comprises Alloy 6061 (column 4 lines 48-55).

Regarding claim 15, Chang discloses the claimed invention except for the lid being made of a soft aluminum material and the module housing is made of a soft aluminum material. Shu teaches a fiber optic module package (see figure 4) comprising a lid (12) and a module housing (11) having knife-shaped edge (34) for forming a sealing mechanism; said lid (12) is made of soft aluminum material (column 4 lines 14-18) and the module housing is made of a soft metal material (column 3 lines 36-40 or column 4 lines 48-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the modified Chang's module package with a lid made of a soft aluminum material and the module housing made of a hard aluminum material as taught by Shu to facilitate the assembly process between the lid and the housing. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the lid of a soft aluminum material and the module housing of a hard aluminum material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 16, Shu teaches the fiber optic module package (see figure 4) wherein the lid (12) is made of a hard aluminum material and the module housing (11) is made of a hard aluminum material (column 4 lines 48-55).

Regarding claim 17, Chang discloses the claimed invention except for the lid being made of a hard aluminum material and the module housing is made of a hard aluminum material. Shu teaches a fiber optic module package (see figure 4) comprising a lid (12) and a module housing (11) having knife-shaped edge (34) for forming a sealing mechanism; said lid (12) is made of soft aluminum material (column 4 lines 14-18) and the module housing is made of a soft metal material (column 3 lines 36-40 or column 4 lines 48-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the modified Chang's module package with a lid made of a soft aluminum material and the module housing made of a hard aluminum material as taught by Shu to facilitate the assembly process between the lid and the housing. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the lid of a soft aluminum material and the module housing of a hard aluminum material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 18, Chang discloses the claimed invention except for the lid being made of a first material and the module housing being made of a second material. Shu teaches a fiber optic module package (see figure 4) comprising a lid (12) and a module housing (11) having knife-shaped edge (34) for forming a sealing mechanism;

Art Unit: 2831

said lid (12) is made of a first material (column 4 lines 14-18, soft aluminum) and the module housing (11) is made from a second material (column 3 lines 36-40 or column 4 lines 48-55, e.g. zinc). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make Chang's module package with a lid from a first material and the module housing from a second material as taught by Shu to facilitate the assembly process between the lid and the housing. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the lid of a soft aluminum material and the module housing of a hard aluminum material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Regarding claim 19, Shu teaches the fiber optic module package (see figure 4), wherein the first material of the lid (12) comprises aluminum alloy, stainless steel, copper, or titanium (column 4 lines 14-16).

Regarding claim 20, Shu teaches the fiber optic module package (see figure 4), wherein the second material of the housing (1) comprises aluminum alloy, stainless steel, copper, or titanium (column 3 lines 36-40 or column 4 lines 48-55).

Regarding claim 21, Chang discloses the claimed invention except for the lid being made from the same material as the module housing. Shu teaches a fiber optic module package (see figure 4) comprising a lid (12) and a module housing (11) having knife-shaped edge (34) for forming a sealing mechanism; said lid (12) and said housing being made of the same material (column 4 lines 48-62). It would have been obvious to

one of ordinary skill in the art at the time the invention was made to make Chang's module package with a lid being made from the same material as the module housing as taught by Shu to facilitate the assembly process between the lid and the housing. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the lid of a soft aluminum material and the module housing of a hard aluminum material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

5. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Loh (US 6,798,966) in view of Chang (US 5,153,380).

Regarding claim 22, Loh discloses a fiber optic module package (see figure 1), comprising: a lid (4) having a plurality of holes (41) and having a bottom surface (see figure 1) and a module housing (1), wherein the lid (4) and the module housing (1) are sealed when a plurality of screws (not shown) are inserted through the plurality of holes (41) of the lid (4) and into the module housing (1) to serve a holding mechanism for holding the lid (4) and the module housing (1) together (column 2 line 66-column 3 line 7); but Loh lacks the module housing having a knife-shaped edge that bites in to the bottom surface of the lid. Chang teaches a fiber optic module package (see figure 3), comprising: a lid (4) having a bottom surface; and a module housing (1) having a knife-shaped edge (111); wherein the lid (4) and the module housing (1) are sealed when the knife-shaped edge (111) bites into the bottom surface of the lid to form a sealing

mechanism (see figures 4a and 4c; or see column 2 lines 28-41). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make Loh's module housing with knife-shaped edges that bites in to the bottom surface of the lid as taught by Change to improve the enclosure sealing capabilities.

Allowable Subject Matter

6. Claims 3-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The primary reason for the indication of the allowability of claims 3-5 is:

Regarding claims 3-5, the prior art does not teach or fairly suggest in combination with the other claimed limitations the lid having a slot with an outer wall.

This limitation is found in claims 3-5, and is neither disclosed nor taught by the prior art of record, alone or in combination.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McGrew et al (US 6,570,089), Krause et al (US 6,586,674), Leischner et al (US 5,880,401), Pastuch (US 6,831,222), Appleton (US 4,620,061), Liautaud (US 3,575,546), Greskamp et al (US 3,648,337), Hinze (US 5,703,754) and Feraing, Jr. et al (US 5,534,664) a housing and lid locking mechanism.

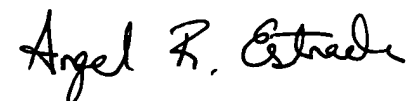
8. Any inquiry concerning this communication should be directed to Angel R. Estrada at telephone number (571) 272-1973. The Examiner can normally be reached on Monday-Friday (8:30 -5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 Ext: 31. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 27, 2005



Angel R. Estrada
Patent Examiner
Art Unit: 2831